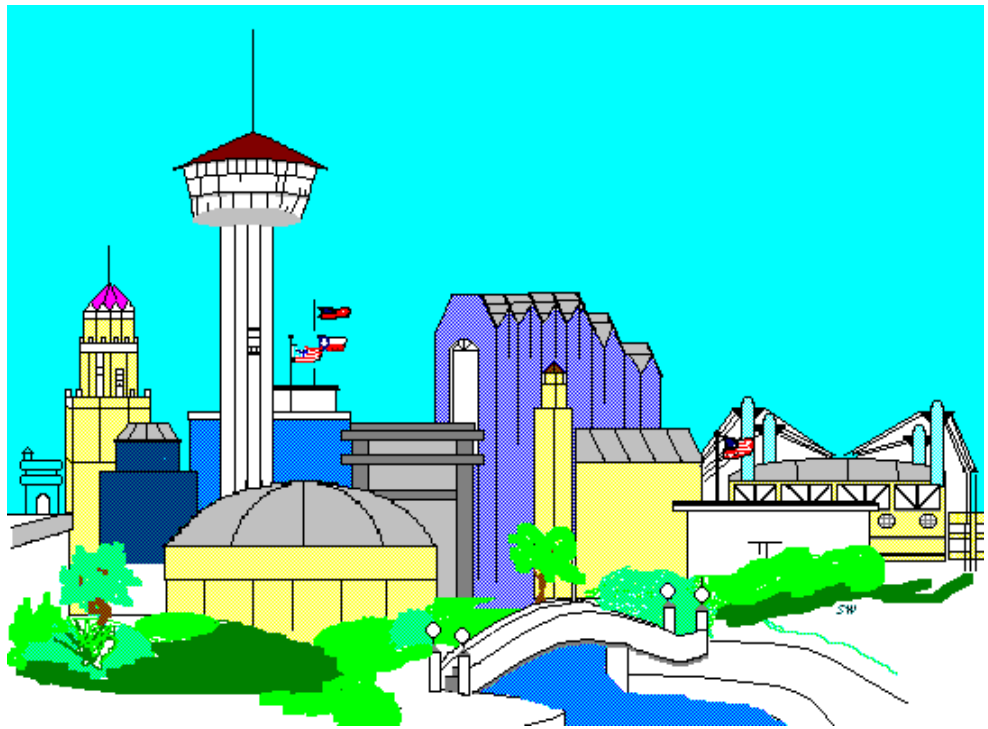
SAN ANTONIO METROPOLITAN HEALTH DISTRICT HEPATITIS PROGRAM

- HEPATITIS A
- HEPATITIS B
- PERINATAL HEPATITIS PROGRAM
- HEPATITIS C



METRO HEALTH
SAN ANTONIO'S PUBLIC HEALTH TEAM

Hepatitis A

METRO HEALTH

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Hepatitis A

- **What causes hepatitis A?**
- **How is hepatitis A spread?**
- **What are the signs and symptoms of the disease?**
- **What is the treatment for hepatitis A?**
- **How can hepatitis A be prevented?**

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- **What causes hepatitis A?**

Hepatitis A (Hep A) is a disease of the liver caused by a virus called the Hepatitis A Virus (HAV).

•How is Hepatitis A spread (transmitted)?

The virus is usually spread by putting material into the mouth which has feces (stool) on it (oral-fecal route).

This may be food that has been handled by someone who has hepatitis A, and did not wash his hands with soap and water after having used the bathroom to have a bowel movement (stool).

Shellfish, eaten raw or slightly heated, may infect the diner if obtained from an area where sewage is leaking into the waters.

Drinking water may be contaminated by raw sewage.

Young children can spread the virus by handling toys with hands that have stool on them because they do not remember to wash their hands. Other children put the toys with traces of stool on them in their mouths and become infected.

The virus can be transmitted via blood in rare instances when the patient has viremia (high concentrations of the virus in the blood for short periods of time)

- **What are the signs and symptoms of hepatitis A?**

Children may not have any symptoms.

Adults may feel fatigued (tirdness), have nausea, vomiting and fever.They may develop jaundice (yellow color in the skin and the whites of the eyes), abdominal pain, clay-colored (pasty grayish-white) stools and dark urine.

Since several types of hepatitis have similar symptoms a blood test is necessary to confirm the type of hepatitis is hepatitis A.

A person may be infectious (able to spread the virus to others) before symptoms appear (as early as two weeks before).

- **What is the treatment for hepatitis A?**

There is not a specific treatment for hepatitis A.

The care is usually directed towards helping the patient feel better with lots of rest, nourishing food and relief of symptoms.

Hepatitis A is rarely fatal. Patients usually clear the virus from their bodies after a few monthsof time. Only about 100 individuals a year die from hepatitis A.

There **is not** a chronic carrier status with hepatitis A.

(Chronic carrier status means the individual can not clear the virus from their body and continues to carry the virus around. Chronic carries do not appear ill but can infect others.)

- **How can hepatitis A be prevented?**

Good handwashing can contribute to prevention,

Washing food well (that will be eaten raw) can remove traces of dirt and dried fecal material. Peel fruits and vegetables to remove rinds and skins that are contaminated. When in doubt, cook the food well.

Bottled water is the best bet in an area where the water supply is suspect. (Do not use ice cubes made from contaminated water--freezing does not kill the virus.)

Immune Globulin (IG) can provide temporary protection for up to three months if given prior to exposure or within 2 weeks of exposure.

•What about Hepatitis A vaccine?

There is a vaccine which will protect individuals against hepatitis A.

The vaccine is given in a two shot series. To be completely protected the individual must complete the two shot series. The first shot is given to the individual and the second shot needs to be given 6-12 months later .

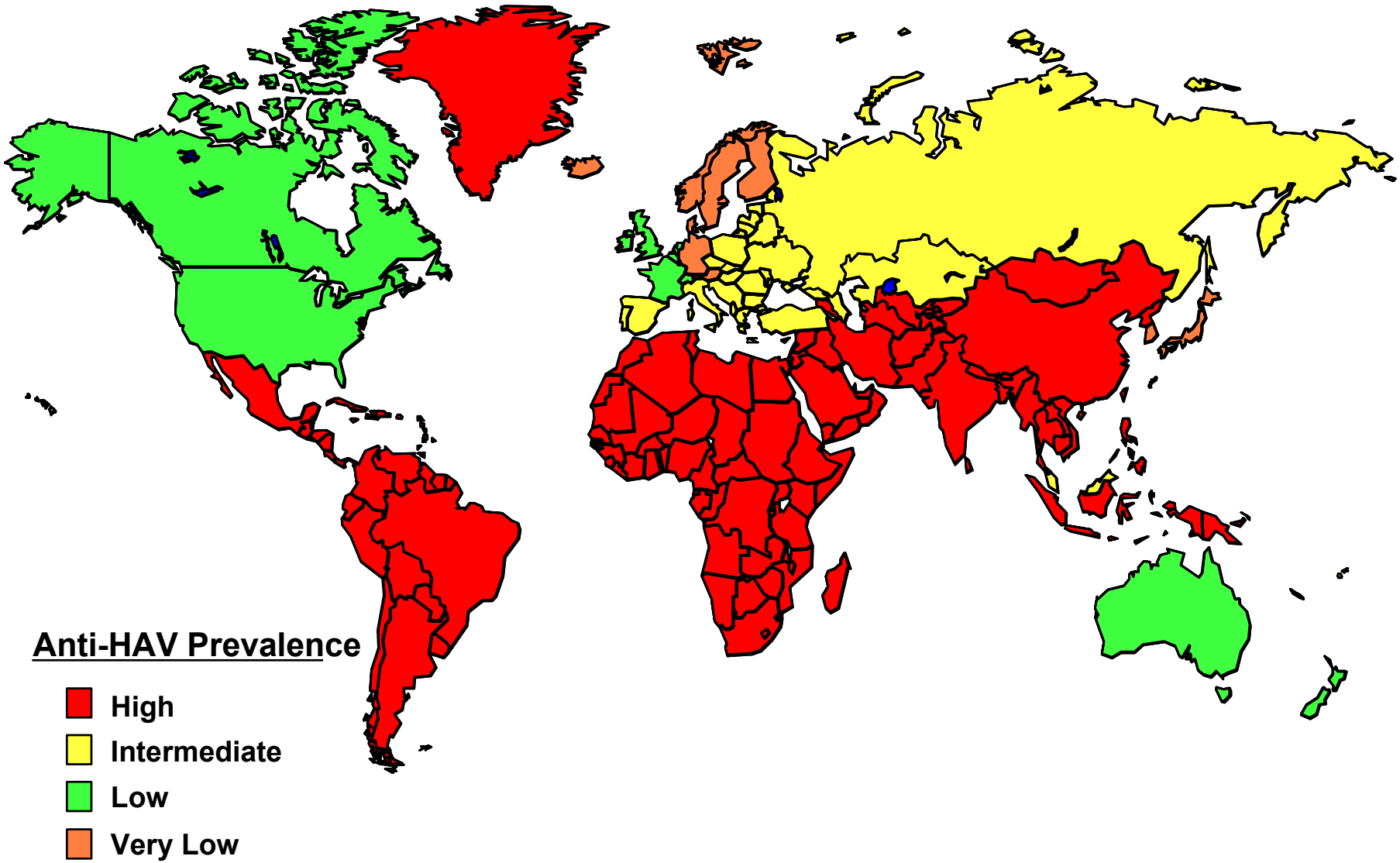
The individual's body reacts to the inactive virus particles in the vaccine by producing protective chemicals (antibodies) in the blood. It takes about 2 weeks after the shot for the antibodies to reach a level high enough to protect the individual.

The vaccine is available at the doctor's office or at a local public health clinic.

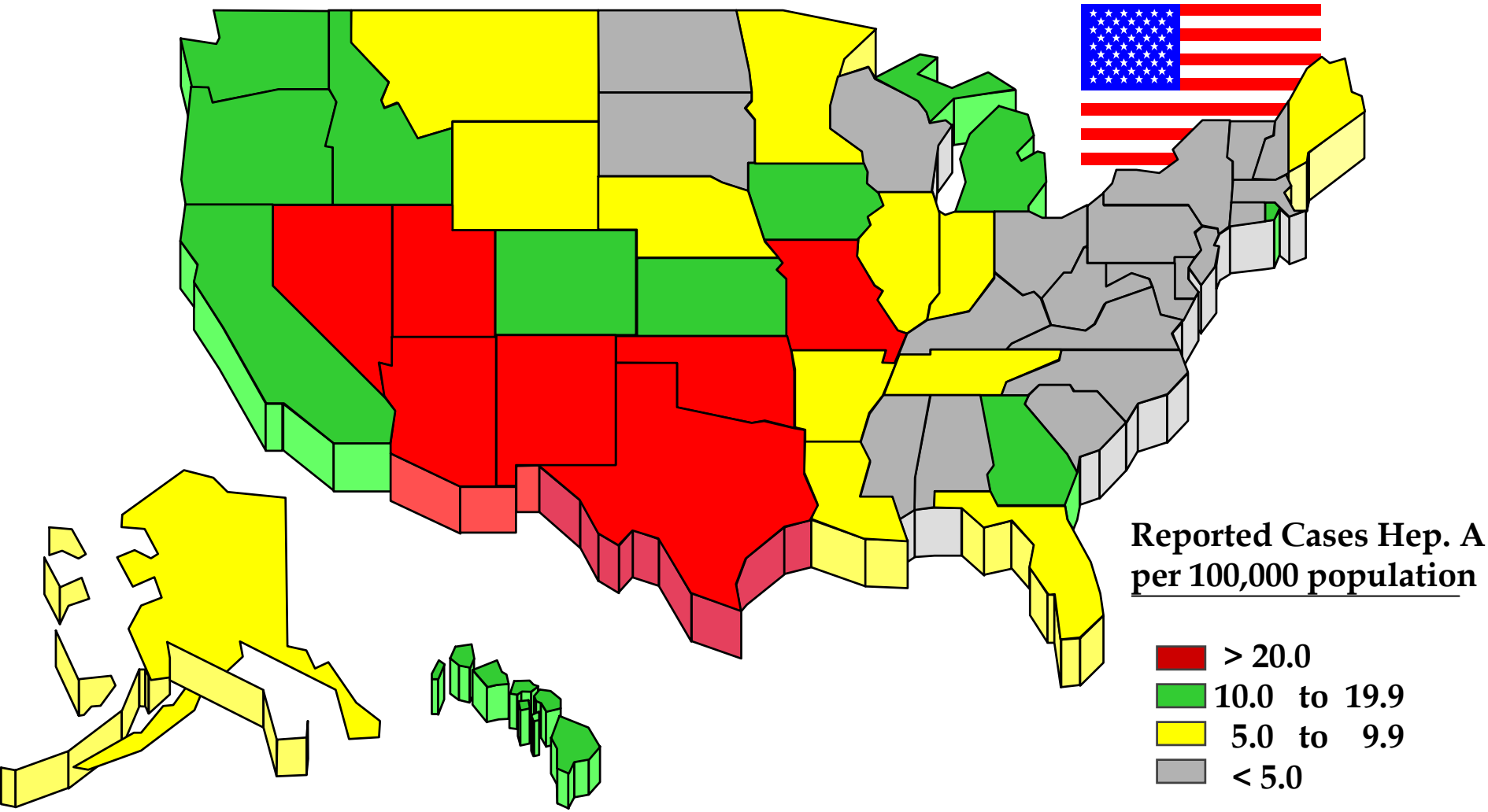
Links to Hepatitis A stastics and surveillance data

- World Distribution of Hepatitis A By Country
- Reported Cases of Hepatitis A in U.S. 1997
- Counties in Texas requiring Hep A vaccine for school entry
- Hepatitis A cases reported San Antonio 1989-2000
- CDC hepatitis Homepage
  http://www.cdc.gov/ncidod/diseases/hepatitis/index.htm
- Hepatitis Foundation International http://hepfi.org/
- Texas Dept. of Health Epidemiology and Surveillance Homepage
  http://www.tdh.state.tx.us/immunize/survepi.htm

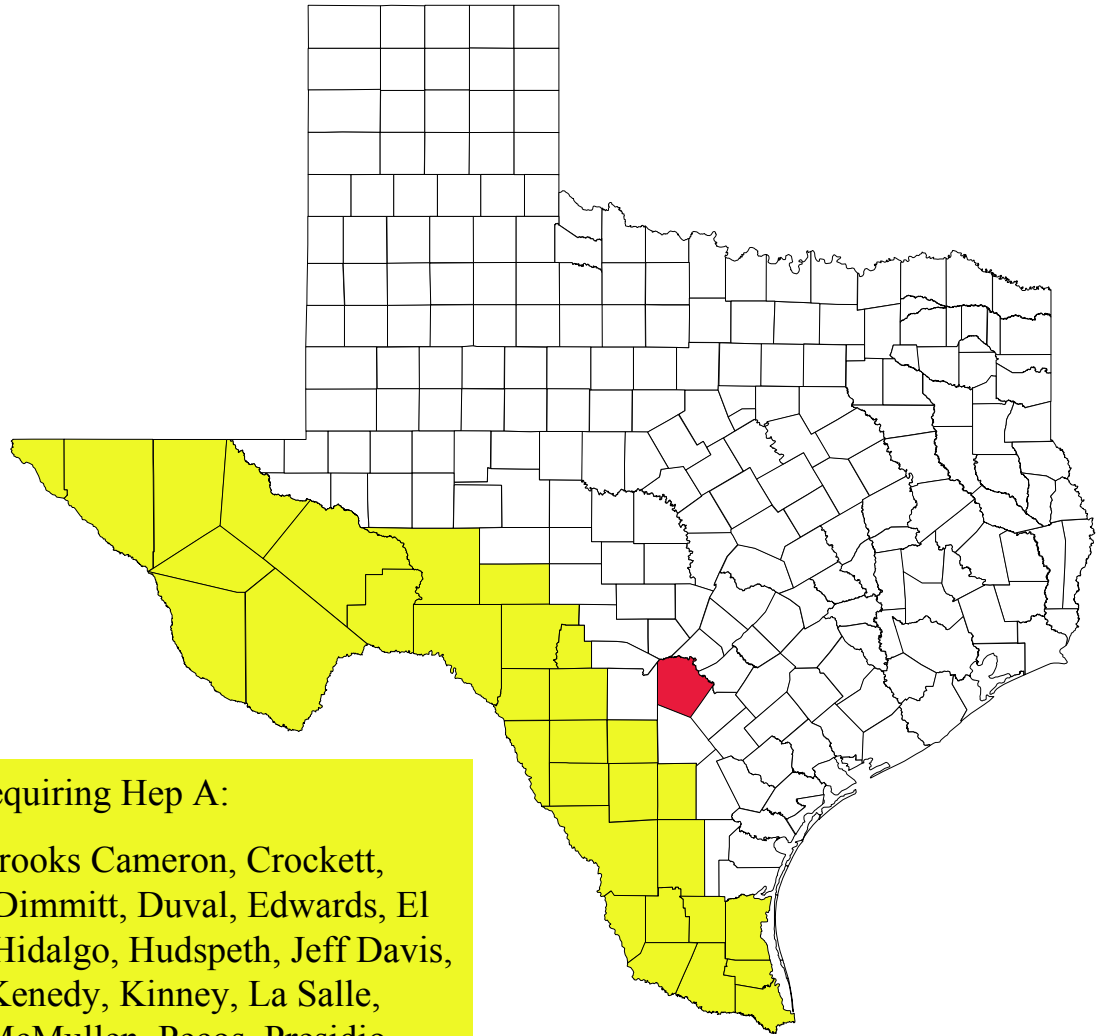
Geographic Distribution of HAV Infection



Reported Cases of Hep. A per 100,000 Population, U.S.- 1997



Counties with Hepatitis A Requirements for School Entry



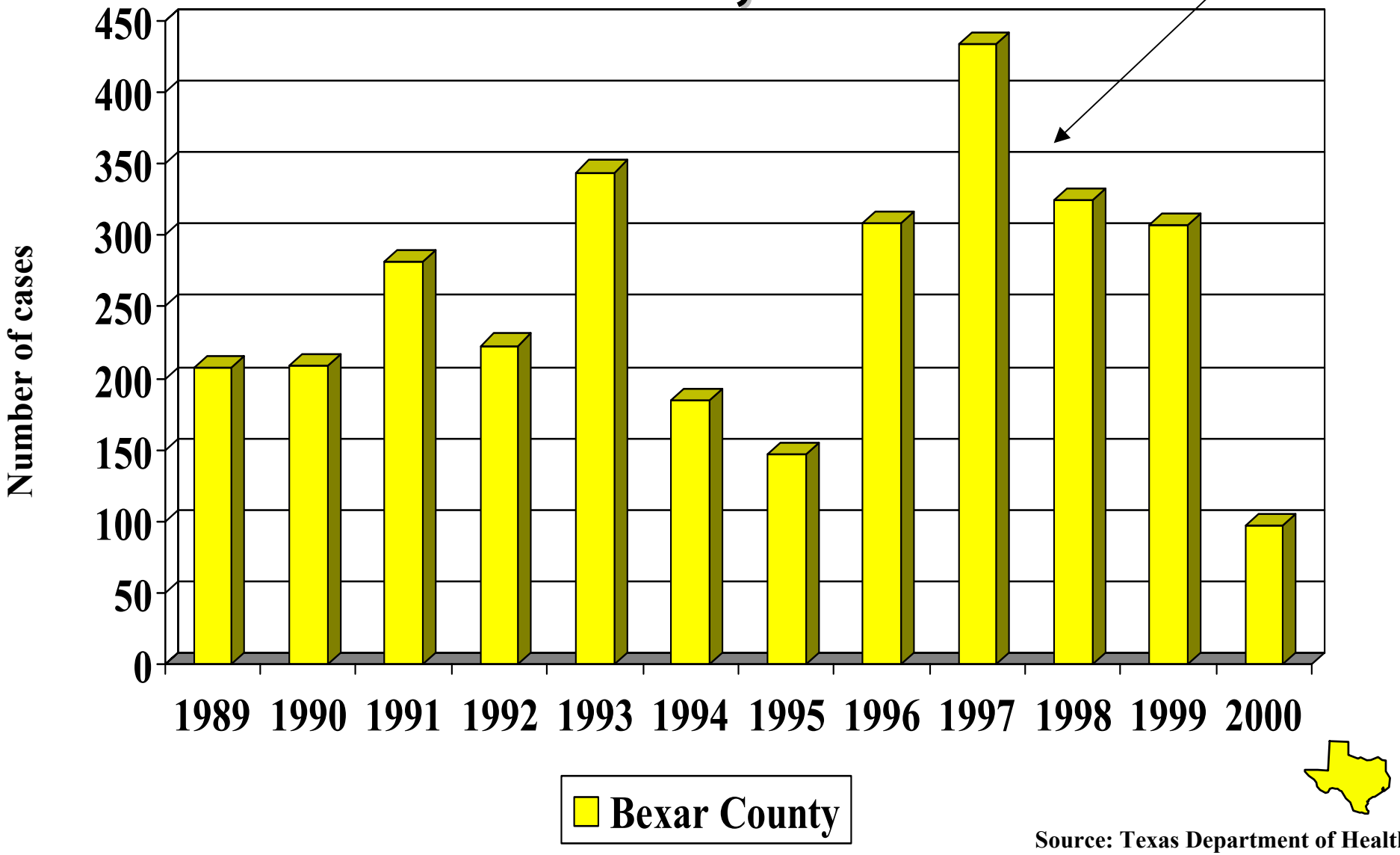
Bexar County

Counties Requiring Hep A:

Brewster, Brooks Cameron, Crockett, Culberson, Dimmitt, Duval, Edwards, El Paso, Frio, Hidalgo, Hudspeth, Jeff Davis, Jim Hogg, Kenedy, Kinney, La Salle, Maverick, McMullen, Pecos, Presidio, Real, Reeves, Star, Sutton, Terrell, Uvalde, Val Verde, Webb, Willacy, Zapata, Zavala

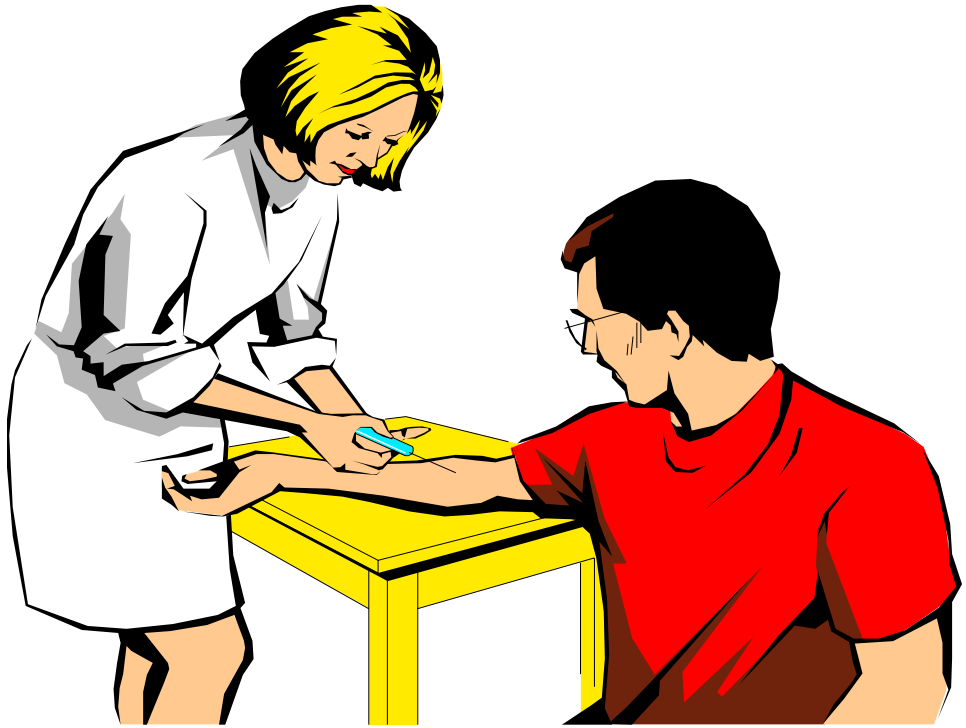
Hepatitis A Disease San Antonio, 1989-2000

SAMHD Hep. A Project Implemented 10/97



Source: Texas Department of Health

HEPATITIS B



METRO HEALTH

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•What is hepatitis B?

Hepatitis B is a disease caused by a virus that attacks the liver. This liver infection can cause severe illness, liver damage/liver cancer and, in some cases, death.

•How is this virus spread?

The hepatitis B virus (HBV) is found in the blood and some body fluids of infected individuals. The body fluids where HBV is found in the largest amounts include serum, semen, and vaginal secretions. There are certain activities that place an individual at risk for contacting the virus.

- **What activities place a person at risk for contacting hepatitis B?**

Individuals who have a higher risk are persons who:

- have a occupation which has exposure to blood (example-lab tech, EMT, etc.)
- use IV drugs
- have had more than one sex partner in last 6 months
- was born in or has parents from Asia, Africa, Pacific Islands, Middle East, or Eastern Europe.
- have hemophilia
- live in a household with a HBV-positive person

- **Hepatitis B is NOT spread by:**
  - visiting the house of someone who is infected
  - sharing food, glasses or utensils with someone who is infected
  - playing with an infant or child who is a carrier
  - being sneezed or coughed upon by a carrier

- **Thirty-forty percent of individuals who have the hepatitis B infection deny any risk factors or behaviors.**

- **What are the signs & symptoms of hepatitis B?**
  - Many people don't know they have hep B. They don't feel or look sick. They are very surprised to learn they have hepatitis B.
  - Some individuals have very mild symptoms like the flu (nausea, vomiting, fever, loss of appetite, etc.) and do not realize it is hepatitis B not the flu.
  - Some have more noticeable symptoms such as jaundice (yellowing of skin and whites of the eyes), abdominal pain, dark urine and pasty clay-colored stools.

- **What does it mean to be a chronic carrier?**

Most individuals can clear the hepatitis B virus from their bodies. However, about 5-10 % of infected adults are unable to clear the virus from their bodies. The virus continues to stay in their blood and body fluids. Usually these individuals do not look or feel sick but they can pass the virus on to others.

Person who are chronic carriers should be followed by a physician to check for development of liver problems caused by the virus. It is also important that the carrier protect others from contracting the disease by preventing contact with their blood and body fluids which contain virus particles.

Is Hepatitis B serious in a pregnant woman?

Pregnant women who are infected with the hepatitis B virus at the time of delivery can pass the virus on to their baby. These babies must be treated at birth to prevent development of an infection which for 80-90% of the infants will lead to becoming a chronic carrier.

Pregnant women should be tested during their pregnancy and at the time of admission for delivery for the hepatitis B virus. If the mother is positive the baby will need 2 shots immediately after birth (one is hepatitis B immune globulin {HBIG} and the other is the first of the series of 3 hepatitis B vaccinations). The other 2 shots will be given at one month and six months of age. At about a year of age the baby needs a blood test to be sure he/she is protected and not infected.

- **What is the best way to protect a person from hepatitis B?**

There is a vaccine that, after completing the series of 3 doses, provides protection to over 90% of the individuals who receive it.

The vaccine is given in a 3 shot series with the first shot given, one month later the second shot and 6 months after the first shot the third shot is given.

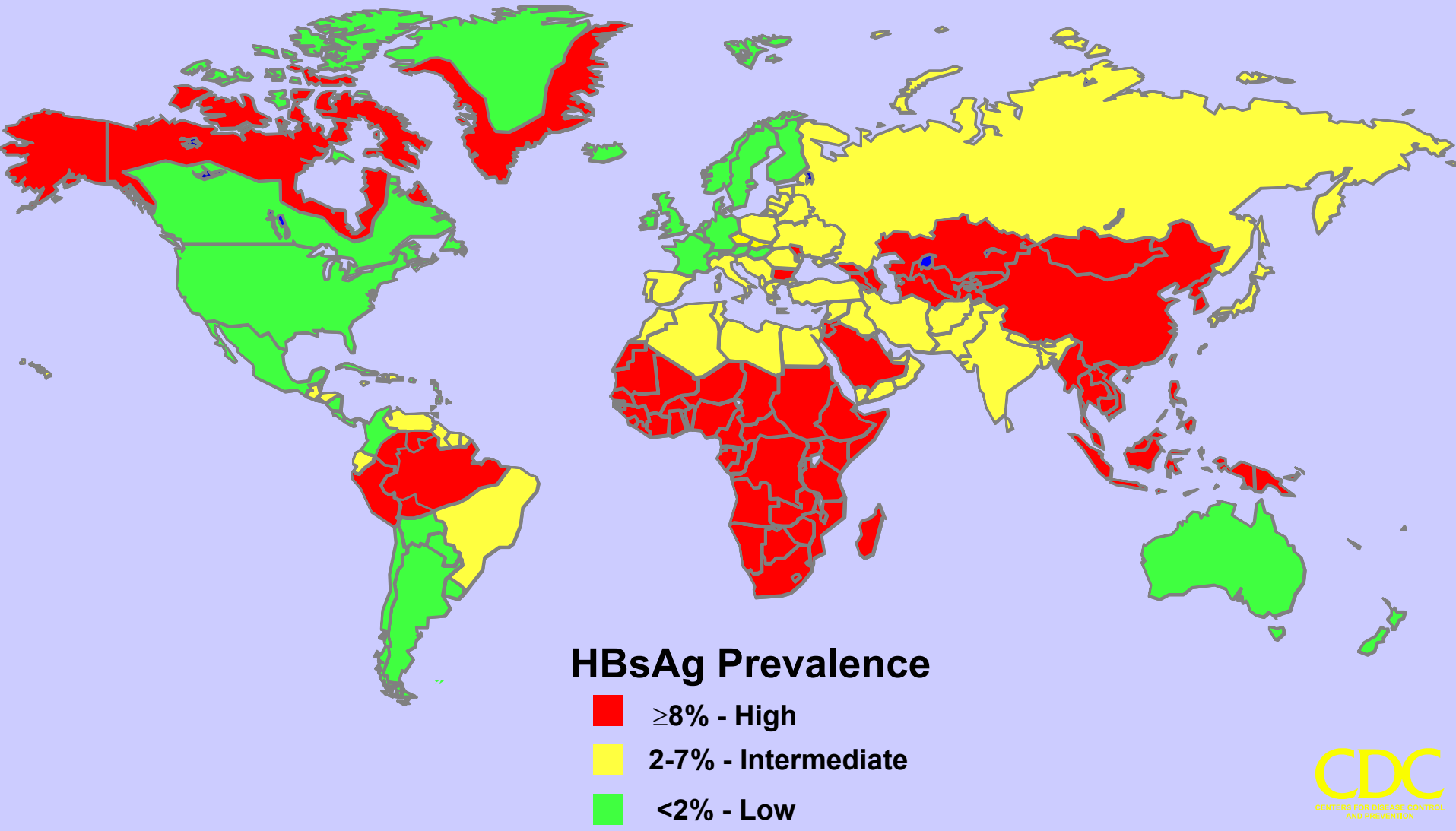
This vaccine is recommended for all infants during the first year of life. Texas requires all children born on or after September 2, 1992 show proof of hepatitis B vaccination or lab results confirming immunity to enter daycare or school.

This vaccine is available through physician's offices and local public health clinics.

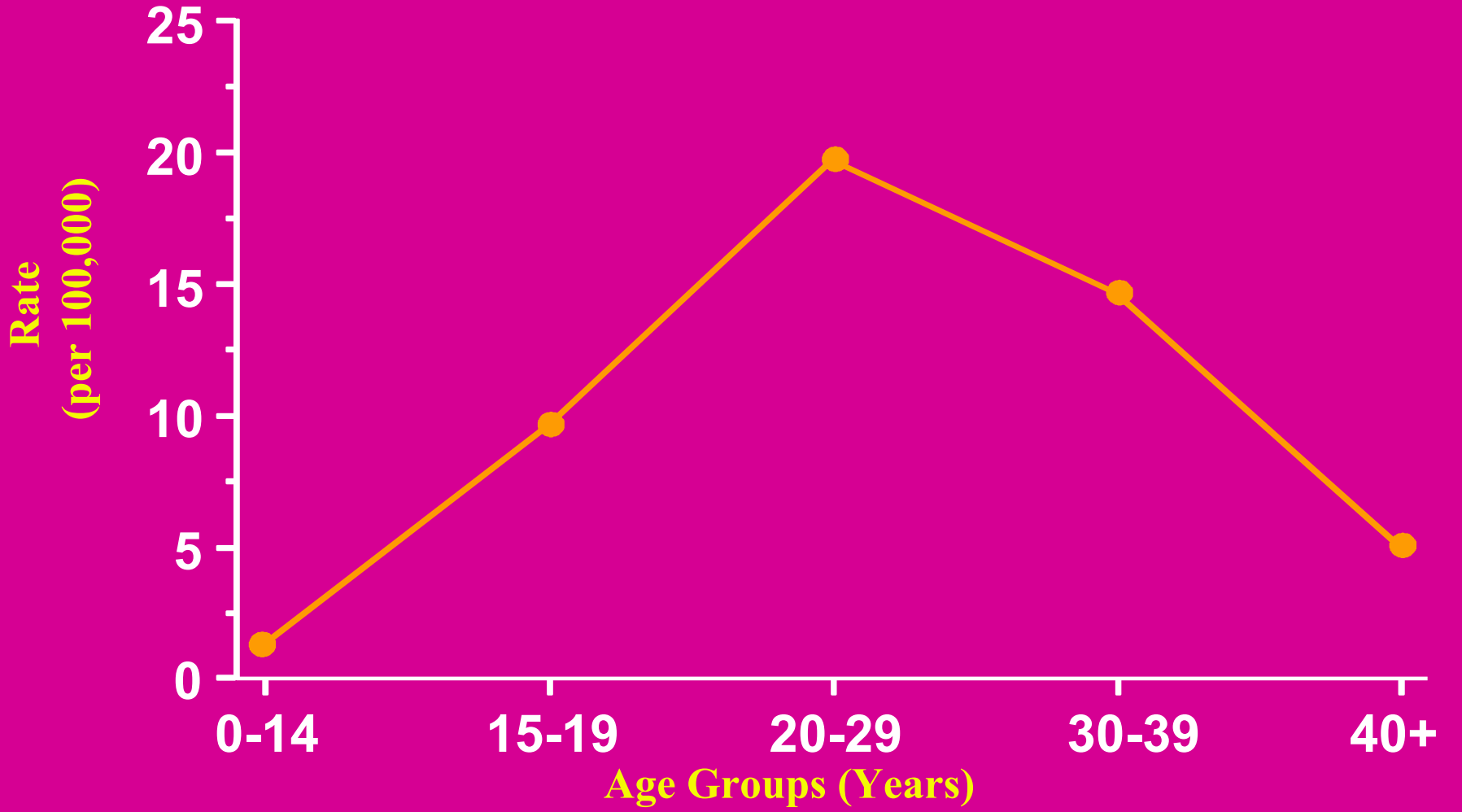
Links to Hepatitis B stastics and surveillance data

- **World Distribution of Hepatitis B By Country**
- **Rate of Reported Hepatitis B by Age Group**
- **Age at Acquisition of Acute and Chronic HBV Infection**
- **CDC hepatitis Homepage** http://www.cdc.gov/ncidod/diseases/hepatitis/index.htm
- **Hepatitis Foundation International** http://hepfi.org/
- **Texas Dept. of Health Epidemiology and Surveillance Homepage** http://www.tdh.state.tx.us/immunize/survepi.htm
- **Hepatitis B Foundation** http://www2.hepb.org/
- **American Liver Foundation** http://www.liverfoundation.org/
- **Immunization Action Coalition** http://www.immunize.org/

Geographic Distribution of Chronic HBV Infection



Rate of Reported Hepatitis B by Age Group United States, 1990

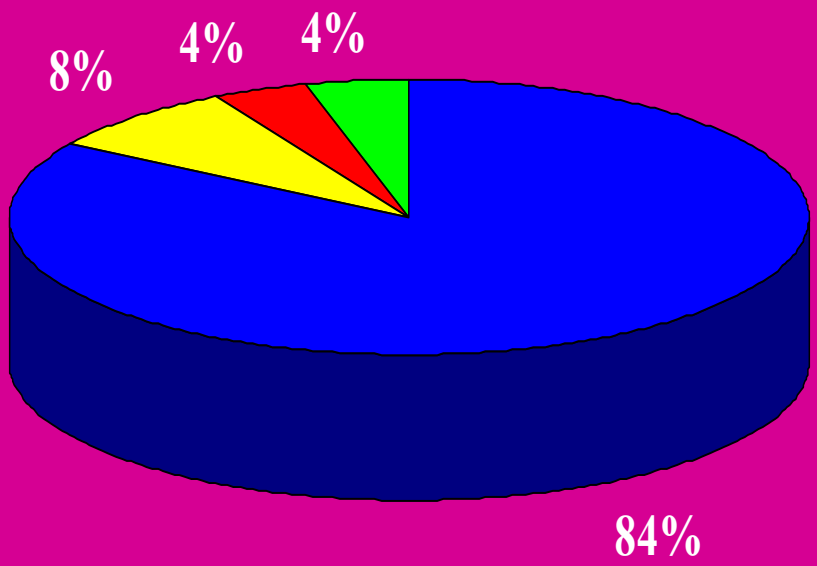


Source: CDC Viral Hepatitis Surveillance Program

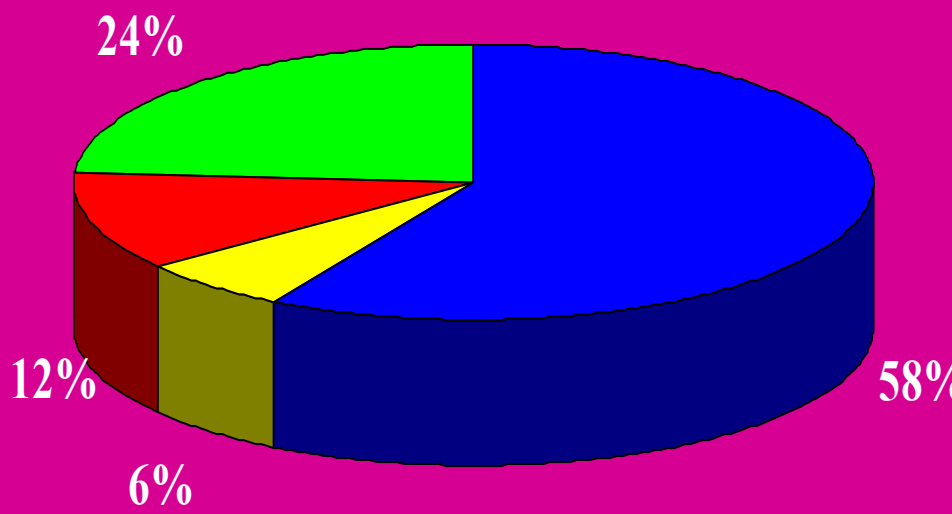
CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Age at Acquisition of Acute and Chronic HBV Infection, United States, 1989 Estimates

Acute HBV Infections



Chronic HBV Infections



Perinatal Hepatitis B Program

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Screening Requirements for Hepatitis B

In September 1999 a law become effective, in the state of Texas requiring pregnant women to be tested during gestation and at the time of delivery for the hepatitis B virus (HBV).

Prenatal testing can identify those women who are infected and able to pass the hepatitis B virus on to their babies at birth. If hepatitis B immune globulin (HBIG) and hepatitis B vaccine are administered to the baby immediately after birth, this infection in the baby can be prevented.

Reporting HBsAg-Positive PregnantWomen

All clinics, physicians' offices, and birthing hospitals should report the to the San Antonio Metropolitan Health District any HBsAg-positive pregnant women as soon as their test results are known.

Perinatal Hepatitis B Immunotherapy

Management of Infants born to HBsAg-positive women

- The initial treatment of these babies include administering hepatitis B immune globulin (HBIG) and hepatitis B vaccine within 12 hours of delivery. (HBIG can be given up to 7 days after birth in unusual circumstances.)

- The two additional doses to complete the series should be given at one and six months of age. Three to six months after the last dose of vaccine a blood test should be done to verify the infant is protected.

Perinatal Hepatitis B Immunotherapy

- The lab should test the blood for both protective antibodies and the HBsAg protein. If the test shows no antibodies and no HBsAg protein, then a second series of 3 vaccinations should be performed. The infant should be retested for protection 2 months after the end of the second series.
- If there are no antibodies and the HBsAg protein is present this means the baby is infected with HBV and should be referred for follow-up by a specialist.
- Testing for other household members and sexual contacts is recommended. Those testing negative for the virus should be immunized.

SAMHD Perinatal Hepatitis B Program

- The San Antonio Metropolitan Health District has a Perinatal Hepatitis B Prevention Program for the HBsAg-positive pregnant woman, her infant and household contacts.
- Some of the services available are:
  - Free testing, counseling, and, where appropriate, vaccination of household contacts of the HBsAg-positive pregnant woman.
  - If the family and their physician wish, the Perinatal Program can provide free hepatitis B immunizations and post-series completion testing for the infant at no charge through a series of home visits.

SAMHD Perinatal Hepatitis B Program

- Other services available from SAMHD:
  - Free information sheets (in several languages) to provide education about hepatitis B to the family members and the infant's parents.
  - Educational seminars about hepatitis for professional and community groups.
- For additional information on how to access these services contact:

Tom Gonzalez, MLT, Perinatal Supervisor at (210) 207-2088

PERINATAL HEPATITIS B PROJECT
REFERRAL FORM

Mother's name_____ D.O.B._____ Medical Record #_____

Other name mother may have used_____

Address_____
Street Apt. City State Zip

Telephone_____
Home Work Other

EDC_____ Anticipated delivery hospital_____

Infant's name_____ D.O.B._____ Medical Record#_____

Date/time HBIG given_____ Date Hep B #1 given_____

Referring agency_____ Telephone_____

Check applicable risk factor(s)

- Positive for HBsAg during pregnancy_____
- *NO* prenatal care_____
- *NO* HBsAg screening during pregnancy_____

HBsAg status if completed at time of delivery_____

Phone or fax to:

San Antonio Metropolitan Health District
Attn: Tom Gonzalez, M.L.T.
Hepatitis B Health Program Supervisor
332 West Commerce St., Suite 108
San Antonio, TX 78205-2489

Fax: (210) 224-9853
Phone: (210) 207-2088

Revised 7/03

Hepatitis C

•What is hepatitis C ?

Hepatitis C is a disease caused by a virus (HCV). It is probably the most common chronic bloodborne infection in the U.S.

Many infected persons are not aware of their infection or that their infection is chronic.

Chronic infection means the individual's body is unable to clear the virus from their body. This individual carries the virus particles in his/her body and may pass it on to others. These persons may not show any symptoms and are often surprised when the infection is detected during routine visits to their doctor.

The virus infects the liver and is found in blood and other blood fluids in varying amounts.

- **How is the hepatitis C virus spread to others?**

This virus is spread primarily through contact with blood.

It can also be spread through sexual contact but that happens in only about 3-5% of the time. Although having multiple partners or other STDs does slightly increase the risk.

It is not spread by hugging sneezing, coughing or sharing food or beverages with an infected person.

- **Who is at risk to contact hepatitis C?**

Individuals are more at risk to contact hepatitis C and becoming infected if:

- they have used drugs or shared needles
- they have had a blood transfusion/blood products or had an organ transplant before July 1992
- they have had multiple sexual partners
- they are in professions that expose them to blood & body fluids (such as doctors, nurses, EMTs, etc.)
- they are born to mothers with hepatitis C
- they are on kidney dialysis.

•How can hepatitis C be prevented?

There **IS NOT** a vaccine or immune globulin that can protect the individual against hepatitis C. The best protection is to avoid contact with blood.

This also means that care must be exercised is other aspects of day-to-day living.

- Do not use drugs or share needles
- Use latex condoms every time for sex.
- Healthcare workers should use universal (standard) precautions with **every** patient.
- Avoid tattoos or body piercing in places where equipment may be reused.
- Don't share razors or toothbrushes.

•How serious is hepatitis C?

Hepatitis C can be very serious. Some of the individuals who are chronic carriers will develop liver damage (cirrhosis) and/or liver cancer.

There are some treatments available for those who are experiencing liver damage. These are very strong drugs and a physician should be consulted about these treatment options.

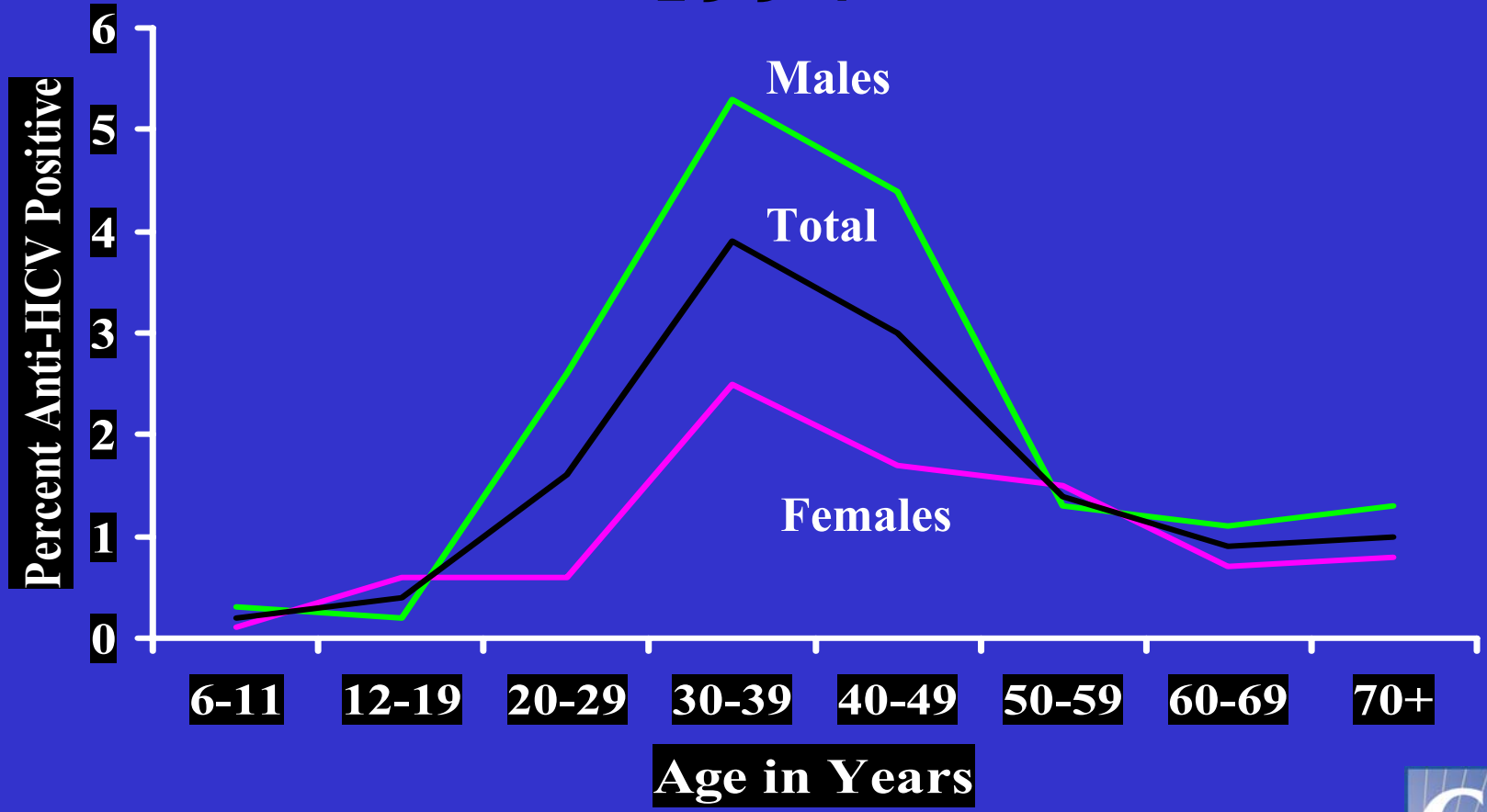
Persons with hepatitis C should be vaccinated against hepatitis A and B. If a person has one type he/she can still contract other types. If the individual contracts one of the other types in addition to hepatitis C it will do more severe damage to your liver.

Individuals who have hepatitis C should avoid alcohol and check with their doctor before taking ANY medications.

Links to additional Hepatitis C information

- **Prevalence of Hep C by Gender**
- **Sources of Infection for Persons with Hepatitis C**
- **Reported Cases of Acute Hepatitis C by Selected Risk Factors**
- **CDC hepatitis Homepage** http://www.cdc.gov/ncidod/diseases/hepatitis/index.htm
- **Hepatitis Foundation International** http://hepfi.org/
- **American Liver Foundation** http://www.liverfoundation.org/
- **Hep CBC** http://www.hepcbc.org/
- **HepNet** http://www.hepnet.com/patients.html

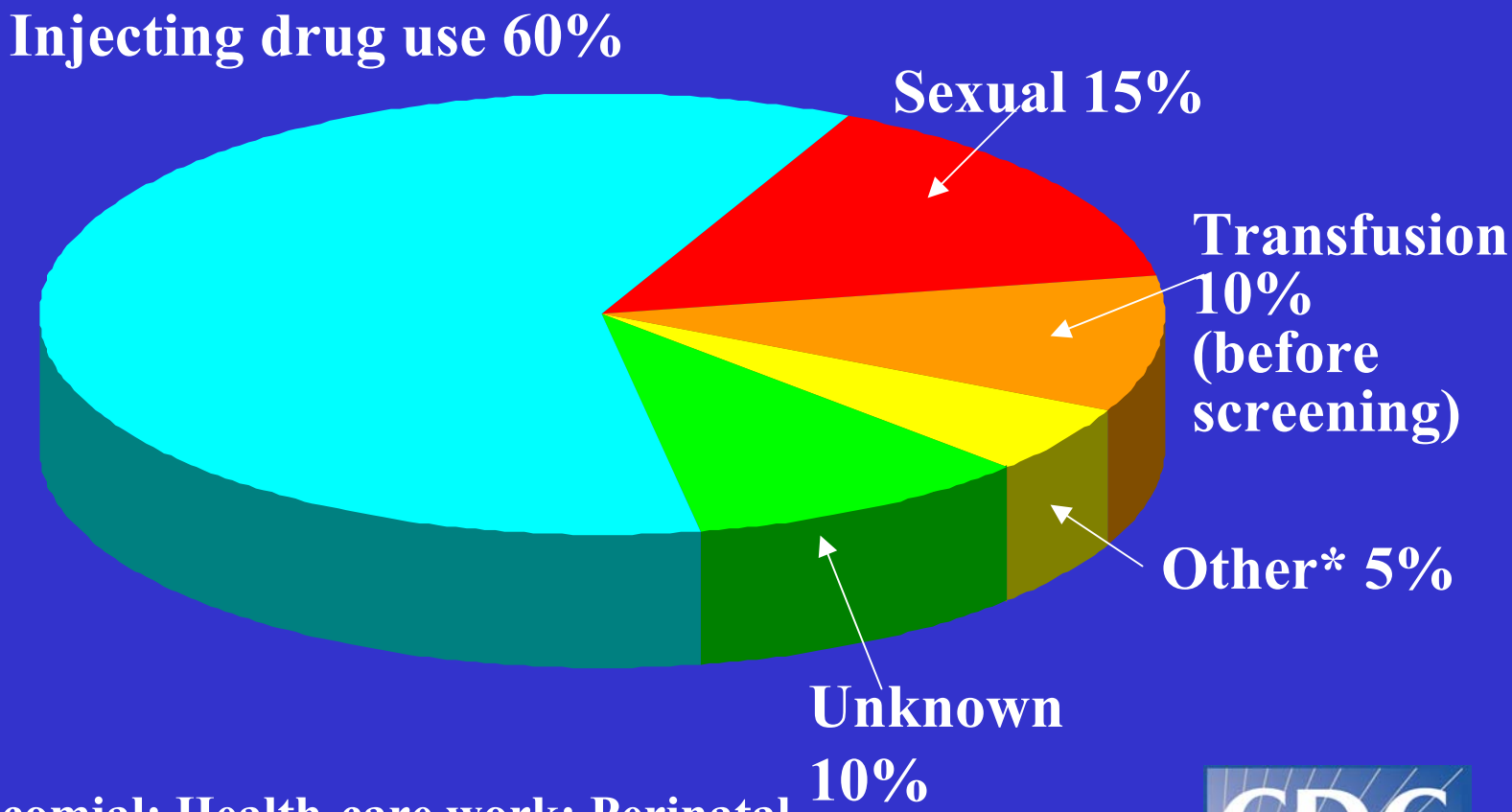
Prevalence of HCV Infection by Age and Gender, United States, 1988-1994



Source: CDC, NHANES III

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Sources of Infection for Persons with Hepatitis C

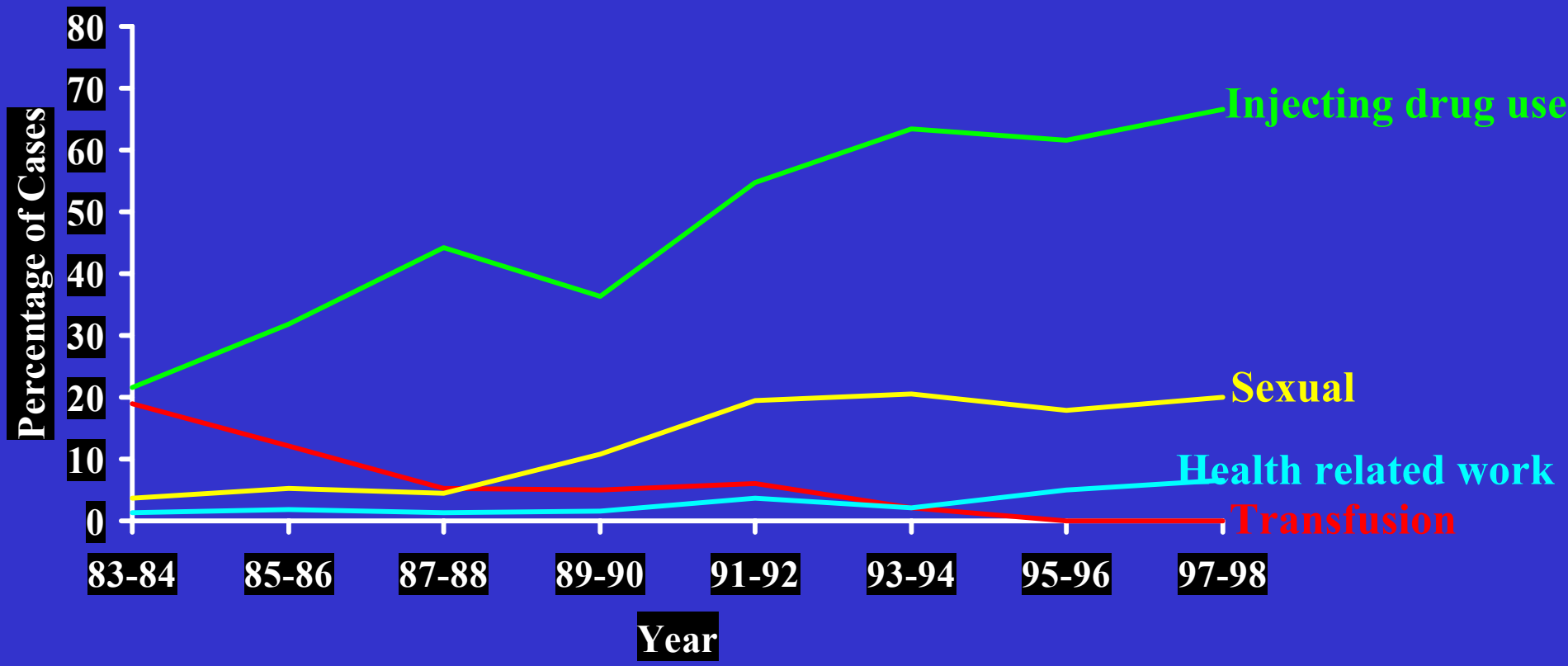


*Nosocomial; Health-care work; Perinatal

Source: Centers for Disease Control and Prevention

CDC
Centers for Disease Control and Prevention

Reported Cases of Acute Hepatitis C by Selected Risk Factors, United States, 1983-1998*



* 1983-1990 based on non-A, non-B hepatitis

Source: CDC Sentinel Counties Study

CDC
Centers for Disease Control and Prevention